

Claims

1. Frying hob arrangement comprising a planar heating means (4,5) including a ferromagnetic material and constituting a frying surface, said arrangement comprises at least two magnetic field generators (1,2) each having  
5 two free ends (6), wherein said heating means is arranged in or close to a plane defined by said free ends, said magnetic field generators are controlled by a control means such that they are adapted to generate alternating magnetic fields in said planar heating means, wherein the magnetic fields are converted into heat in said heating means, c h a r a c t e r i z e d i n that said magnetic fields  
10 being such that the magnetic field through one of said free ends has an opposed direction as compared to the magnetic fields through the other free ends.
2. Hob arrangement according to claim 1, c h a r a c t e r i z e d i n that said two magnetic field generators constitute a magnetic module.  
15
3. Hob arrangement according to claim 2, c h a r a c t e r i z e d i n that said magnetic field generator comprises a magnetic core having said two free ends and is provided with one or many magnetic coils to which magnetic field generating energy is applied.  
20
4. Hob arrangement according to claim 3, c h a r a c t e r i z e d i n that said magnetic core is U-shaped and has two legs and a joining part, wherein one magnetic coil is arranged on each of the legs.
- 25 5. Device according to claim 3, c h a r a c t e r i z e d i n that said magnetic core is divided in two separate rod-shaped legs, wherein at least one magnetic coil is arranged on each of the legs.
6. Hob arrangement according to claim 4 or 5, c h a r a c t e r i z e d  
30 i n that the legs for all magnetic field generators in the magnetic module are parallel.
7. Hob arrangement according to claim 4 or 5, c h a r a c t e r i z e d i n that said applied magnetic field generating energy is an alternating electrical  
35 power having a predetermined frequency, wherein the electrical power is applied

with a reversed polarity to one of the magnetic coils compared to the electrical power applied to the other three coils of the module.

8. Hob arrangement according to claim 4 or 5, characterized in that said applied magnetic field generating energy is an alternating electrical power having a predetermined frequency, wherein the electrical power is applied with a reversed polarity to two of the magnetic coils compared to the electrical power applied to the other two coils of the module.
9. Hob arrangement according to claims 7 or 8, characterized in that said predetermined frequency is in the range of 50-60 Hz.
10. Hob arrangement according to claim 2, characterized in that the arrangement comprises  $3 \times N$  modules, where  $N = 1, 2, 3$  or  $4$ .
11. Hob arrangement according to claim 2, characterized in that the arrangement comprises 1-1000 magnetic modules.
12. Hob arrangement according to claim 1, characterized in that said arrangement comprises at least one temperature sensor arranged close to said plane, wherein said sensor generates temperature signals that are applied to said control means and used to control the heating of the device.
13. Hob arrangement according to claim 1, characterized in that said heating means comprises two planar sheets, a lower sheet facing the free ends of the magnetic field generators and an upper sheet on the opposite side.
14. Hob arrangement according to claim 13, characterized in that said lower sheet is a 2 mm sheet of aluminium and the upper sheet is a 4 mm sheet of iron.
15. Hob arrangement according to claim 13, characterized in that said two sheets are floating with respect to each other, i.e. they are not fastened (fixed) to each other.

16. Hob arrangement according to claim 13, characterized in that said upper sheet is made of a ferromagnetic material and the lower sheet is made from a paramagnetic material.